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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,966	02/22/2007	Kenji Ito	2006_0839A	2536

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WENDEROTH, LIND & PONACK, L.L.P.  
1030 15th Street, N.W.,  
Suite 400 East  
Washington, DC 20005-1503

EXAMINER	
WAITS, ALAN B	

ART UNIT	PAPER NUMBER
3656	

NOTIFICATION DATE	DELIVERY MODE
06/30/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ddalecki@wenderoth.com  
coa@wenderoth.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,966	<b>Applicant(s)</b> ITO, KENJI	
	<b>Examiner</b> ALAN WAITS	<b>Art Unit</b> 3656	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “housing being formed of resin” in claim 1, lines 11-12 must be shown or the feature(s) canceled from the claim(s). The drawings should be correctly hatched to reflect the claim language. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**3. Claims 1-3, 7, 8, 12, 13, 17, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai U.S. 6,412,984 in view of Komori CN 1453481.**

**Re clm 1**, Asai discloses a fluid bearing device comprising a housing (outer circumferential portion of 2, Fig. 5), a bearing sleeve (inner portion of 2) having an inner peripheral surface and being secured in position inside the housing, a shaft member (7) having an outer peripheral surface and being arranged to rotate relative to the bearing sleeve, a radial bearing portion supporting the shaft member radially in a non-contact fashion with an oil film formed in a radial bearing clearance between the inner peripheral surface of the bearing sleeve and the outer peripheral of the shaft member, a second member (21) being fixed by adhesion to the housing (col. 10, lines 48-57), wherein the housing has an adhesion portion (portion where adhesion is located) and is formed of resin (col. 10, line 48), the second member is formed of metal (col. 10, line 51-52).

Asai does not disclose that the adhesion portion of the housing has a molded and roughed surface having a surface roughness of 0.5  $\mu\text{m}$  Ra or more.

Komori teaches a bearing device having a surface roughness of 0.5  $\mu\text{m}$  Ra or more (col. 14, lines 16-21) for the purpose of allowing the adhesive (molten resin) to

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penetrate into minute pits on the surface to provide an anchoring effect (col. 6, lines 8-13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Asai and provide that the adhesion portion of the housing has a molded and roughed surface having a surface roughness of 0.5  $\mu\text{m}$  Ra or more for the purpose of allowing the adhesive to penetrate into minute pits on the surface to provide an anchoring effect, as taught by Komori.

The limitation "the housing has a molded surface" is a product-by-process limitation. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113.

**Re clm 2**, the roughened surface of Komori further discloses that the surface roughness is between 0.5  $\mu\text{m}$  Ra and 2.0  $\mu\text{m}$  Ra (col. 14, lines 16-21).

**Re clm 3 and 8**, Asai further discloses that the second member fixed to the housing by the adhesion is a bracket for mounting a stator coil (19) of a motor.

**Re clm 7, 12, 13 and 17**, Asai further discloses a motor (Fig. 5) comprising a fluid bearing device (2 and 7) comprising a stator coil (19) and a rotor magnet (18a).

**Re clm 21**, Asai further discloses that the bracket is formed of metal and is fixed to an outer peripheral surface of a side portion of the housing (Fig. 5).

**Re clm 24**, Asai further discloses an adhesion gap between the adhesion portion of the housing and the second member, and the adhesion fills in the adhesion gap (col. 10, lines 54-56).

**4. Claims 1, 2, 4-6, 9-12, 14-16, 18, 19, 20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita U.S. 6,921,208 in view of Komori CN 7,025,505.**

**Re clm 1**, Yamashita discloses a fluid bearing device comprising a housing (7, Fig. 2), a bearing sleeve (8) having an inner peripheral surface, and being secured in position inside the housing, a shaft member (2) having an outer peripheral surface, and being arranged to rotate relative to the bearing sleeve, a radial bearing portion (R1 and R2) supporting the shaft member radially in a non-contact fashion with an oil film formed in a radial bearing clearance between the inner peripheral surface of the bearing sleeve and the outer peripheral surface of the shaft member, a second member (10) being fixed by adhesion to the housing (col. 3, line 66 to col. 4, line 5), wherein the housing has an adhesion portion (location where adhesive is applied) and is formed of resin (col. 3, lines 15-16), the second member is formed of metal (col. 7, lines 45-47).

Yamashita does not disclose that the adhesion portion of the housing has a roughed surface having a surface roughness of 0.5  $\mu\text{m}$  Ra or more.

Komori teaches a bearing device having a surface roughness of 0.5  $\mu\text{m}$  Ra or more (col. 14, lines 16-21) for the purpose of allowing the adhesive (molten resin) to penetrate into minute pits on the surface to provide an anchoring effect (col. 6, lines 8-13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Yamashita and provide that the adhesion portion of the housing has a roughed surface having a surface roughness of 0.5  $\mu\text{m}$  Ra or more for the purpose of allowing the adhesive to penetrate into minute pits on the surface to provide an anchoring effect.

**Re clm 2**, the roughened surface of Komori further discloses that the surface roughness is between 0.5  $\mu\text{m}$  Ra and 2.0  $\mu\text{m}$  Ra (col. 14, lines 16-21).

**Re clm 4 and 9**, Yamashita further discloses that the second member fixed to the housing by the adhesion is a sealing member (10) for sealing up an opening of the housing.

**Re clm 5 and 10**, Yamashita further discloses that the second member fixed to the housing by the adhesion is a thrust bush (10) closing a bottom portion of the housing.

**Re clm 12, 14, 15, 18, 19**, Yamashita further discloses a motor (Fig. 1) comprising a fluid bearing device comprising a stator coil (4) and a rotor magnet (5).

**Re clm 22**, Yamashita further discloses that the sealing member (10) is fixed to an inner peripheral surface of the housing (Fig. 2).

**Re clm 23**, Yamashita further discloses that the thrust bush (10) is fixed to an inner peripheral surface of the housing (Fig. 2).

According to another interpretation of Yamashita:

**Re clm 1**, Yamashita discloses a fluid bearing device comprising a housing (7, Fig. 2), a bearing sleeve (8) having an inner peripheral surface, and being secured in

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position inside the housing, a shaft member (2) having an outer peripheral surface, and being arranged to rotate relative to the bearing sleeve, a radial bearing portion (R1 and R2) supporting the shaft member radially in a non-contact fashion with an oil film formed in a radial bearing clearance between the inner peripheral surface of the bearing sleeve and the outer peripheral surface of the shaft member, a second member (8) being fixed by adhesion to the housing (col. 3, line 66 to col. 4, line 5), wherein the housing has an adhesion portion (location where adhesive is applied) and is formed of resin (col. 3, lines 15-16), the second member is formed of metal (col. 4, lines 40-41).

Yamashita does not disclose that the adhesion portion of the housing has a roughed surface having a surface roughness of 0.5  $\mu\text{m}$  Ra or more.

Komori teaches a bearing device having a surface roughness of 0.5  $\mu\text{m}$  Ra or more (col. 14, lines 16-21) for the purpose of allowing the adhesive (molten resin) to penetrate into minute pits on the surface to provide an anchoring effect (col. 6, lines 8-13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Yamashita and provide that the adhesion portion of the housing has a roughed surface having a surface roughness of 0.5  $\mu\text{m}$  Ra or more for the purpose of allowing the adhesive to penetrate into minute pits on the surface to provide an anchoring effect.

**Re clm 2**, the roughened surface of Komori further discloses that the surface roughness is between 0.5  $\mu\text{m}$  Ra and 2.0  $\mu\text{m}$  Ra (col. 14, lines 16-21).



**Re clm 6**, Yamashita further discloses that the second member fixed to the housing by the adhesion is the bearing sleeve (8).

**Re clm 11, 16 and 20**, Yamashita further discloses a motor (Fig. 1) comprising a fluid bearing device comprising a stator coil (4) and a rotor magnet (5).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Regarding Applicant's argument that Komori at best discloses that the chamfered portion has a surface roughness, however, Komori is not relied upon for the location of the surface roughness but merely as anchoring for adhesive (molten resin).

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN WAITS whose telephone number is (571)270-3664. The examiner can normally be reached on Monday through Friday 7:30 am to 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alan B Waits/  
Examiner, Art Unit 3656

/Thomas R. Hannon/  
Primary Examiner, Art Unit 3656